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ABSTRACT

This paper was presented as part of a symposium exploring different philosophical and technical perspectives and implications of implementation research. Some basic differences between the structured and unstructured approach to implementation as portrayed in the literature are described. Next, the assumptions and assessment techniques of the Concerns-Based Adoption Model (CBAM) and two examples of its application are presented. The ideas of the CBAM were developed to represent the highly complex process entailed when educational institutions and the individuals in them become involved in implementing innovations. Thirdly, the dimensions on which the structured and unstructured approaches differ are used to characterize CBAM's approach to implementation. The paper suggests how value assumptions and working relationships resulted in the development of quantitative measurement procedures for program improvement. (Author/MLF)

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STRUCTURED AND UNSTRUCTURED APPROACHES TO IMPLEMENTATION: WHOM DOES THE SHOE FIT?

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The Research and Development Center for Teacher Education
The University of Texas at Austin

Paper presented at the annual meeting of the American Educational Research Association, Boston, April, 1980.

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STRUCTURED AND UNSTRUCTURED APPROACHES TO IMPLEMENTATION: WHOM DOES THE SHOE FIT?[1]

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PART I: INTRODUCTION

The purpose of this symposium is to allow the four of us here who are conducting research on implementation in different institutional settings with different clients to converse about our work and about research on implementation in general. The symposium was initially stimulated by Michael Fullan's paper, "The Relationship Between Evaluation and Implementation in Curriculum" (1979), in which he characterized persons doing research on implementation and persons involved in the implementation process as taking two different approaches, referred to as the "relatively structured approach" and the "relatively unstructured approach."

Different terminology has been used to refer to different approaches among persons "doing" and researching implementation. Rabinovitz, Pressman and Rein (1976) review the "compliance" and "political bargaining" approaches to the

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[1]The research described herein was conducted under contract with the National Institute of Education. The opinions expressed are those of the author and do not necessarily reflect the position or policy of the National Institute of Education, and no endorsement by the National Institute of Education should be inferred.

discussion of implementation in the policy sciences. Peterson (1977) refers to the "rational" and "loosely-coupled" frameworks that describe implementation in organizational theory. Farrar, DeSanctis and Cohen (1979) characterizes education studies viewing implementation as "installation" of federal policy, rather than "evolution." Parlett and Hamilton (1978) discern two distinct paradigms in the evaluation of curriculum innovations in the UK and the US: the "agriculture-botany" paradigm and the "social-anthropology" paradigm. Patton (1979) refers to the "effort," "process," and "treatment specification" as three types of implementation evaluation in mental health. Whatever the labels, the differences between the approaches are similar to those used by Fullan in contrasting the "structured" and "unstructured" approaches to implementation.

The structured-nonstructured dichotomy in the literature on implementation echoes similar splits in other fields. Differences in the assumptions and goals of quantitative and qualitative research strategies in education rings similar to many of the differences between structured and unstructured approaches to implementation. (See, for example, Administrative Science Quarterly, December, 1979; Cook & Reichardt, 1979; Rist, 1979.) So called radical critiques of traditional development growth paradigms in economics, education, and communications resemble the nonstructured approach to implementation and measurement of the change process. (See Goulet, 1976; Rogers, 1976; Srinivasan, 1977.) The general ethos of the two views is surprisingly similar across disciplines, although the specific dimensions selected to contrast the two viewpoints vary.

In Fullan's discussion, the Concerns-Based Adoption Model (CBAM) Project on which I work served as an example of the structured approach. In my paper, I will examine that assertion. First, I will describe some basic differences between the structured and unstructured approach to implementation as portrayed in

the literature. Next, I will present the CBAM model, its assumptions and assessment techniques, and two examples of its application. Thirdly, I will use the dimensions on which the structured and unstructured approaches differ to characterize CBAM's approach to implementation.

Before reviewing a few of the more salient dimensions used to distinguish the two approaches, however, I would like to comment briefly on the diversity of background and focus of people working on implementation analysis, research and evaluation.

People writing about implementation work from different bases or subject areas. These include, among others, policy analysis (Bardach, 1977; Berman, 1980; Rabinovitz, Pressman & Rein, 1976; Williams & Elmore, 1976); curriculum evaluation (Becher & Maclure, 1978; Harlen, 1977; MacDonald, 1977; Parlett & Hamilton, 1977; Tyler, Gagne & Scriven, 1967); evaluation research (Morris & Fitz-Gibbons, 1978; Patton, 1979; Rossi, Freeman & Wright, 1979); and organizational theory (Elmore, 1978; Peterson, 1977; Porras, 1978). People writing about implementation across disciplines occupy different roles in regard to implementation -- researcher, evaluator, policy analyst, developer, change agent, theoretician, and practitioner. Depending on their role, they may refer to the implementation process, or to research/evaluation of implementation, or to both. Depending on their role and subject base, they write about different phenomena, at different levels of the implementation system, using different units of analysis. Each chooses different language and refers to different literatures. In short, although the basic distinctions between structured and unstructured approaches exist across fields, the contexts within which implementation is discussed are multiple.

Those of us on the panel are no exception to this diversity in background and focus. Some of us concentrate primarily upon federal policies, institutions

and macro-implementation problems. Others look to district or school innovations, individuals and institutions and micro-implementation problems. These situational differences can at first obscure deeper contrasts. It appears to me useful, therefore, to remember differences in contextual parameters before looking at the values, epistomology, and methodologies that characterize a person or project as structured or unstructured.

PART II: THE TWO APPROACHES TO IMPLEMENTATION: STRUCTURED AND UNSTRUCTURED

I've chosen three conceptual dimensions from the literature on implementation which seem particularly applicable to our work on the Concerns-Based Adoption Model and will refer to these when I use the terms "structured" and "unstructured." These include: the emphasis placed on fidelity of implementation; the type of methodology used; and the posture toward intervention in the implementation or change process. At the risk of oversimplification, each approach is portrayed at extremes along these dimensions.

(1) Emphasis placed on fidelity of implementation: The structured approach stresses the match between conception and execution of an innovation. It stresses that a "policy is being put into operation according to design" (Patton, 1979, p. 323), that "...movement toward an end-in-view took place as a result of executing a procedure designed for that purpose..." (Leithwood & Montgomery, p. 4). In the structured approach, "the essential implementation problem...is to control and direct the vast profusion of program-related activities carried on by numerous and disparate organizations and individuals so as to achieve program objectives, keep costs down, and reduce delay" (Bardach, 1977, p. 250). In order to insure fidelity, the thing-to-be-implemented must be specified a priori, with as much detail and definition as possible. By implication, an innovation, program, or policy is something that can be described apart

from the context in which it is adopted. It possesses some inherent parts that can be operationally laid out before its application or use in a given setting. Central planning and definition are necessary to eliminate the inefficiency that occurs when locals or users are left with leeway to define an innovation and to participate in decisions about how to implement a policy or program. The less ambiguity and authority left to implementers, the greater the fidelity. Evaluation is conducted to assess how closely implementation resembles the plan for program execution and to provide information for retooling implementation toward the ideal. Specification of end and means at the center; a priori definition of the innovation; implementation as installation; evaluation as assessment of fidelity are hallmarks of the structured approach.

The unstructured approach on the other hand sees policy or innovation as defined by implementers and always in the process of becoming something else. "Plans, programs, judicial decisions, and administrative regulation...exist only as potentialities...which imply wide ranges of possible actions and types of behavior" (Majone & Wildavsky, 1978, p. 109). A policy or innovation should not be prespecified in terms of outcomes and behaviors; it will only become something else when implemented. Nonstructurists are concerned "with establishing acceptable rules of the game that would allow multiple participants to bargain and compromise during the course of implementation" (Berman, 1980, p. 211). Decision-making about how and what to implement should take place at local sites. Assessment of implementation by nonstructurists entails discovery of what implementation actually is within a particular context rather than comparison of implementation with a pre-defined ideal. It focuses on the internal dynamics and actual operations of a program. It describes activities, processes and the interaction of innovation, environments, client and implementers (Becher & Maclure, 1978; Parlett & Hamilton, 1977; Patton, 1979). Definition of policy,

or curricula, by implementers; implementation as evolution; evaluation as description of interaction between context and innovation are characteristics of the nonstructured approach.

(2) Methodological emphasis: The emphasis placed upon fidelity has implication for the way in which structurists and nonstructurists approach the measurement and evaluation of implementation. The point has been made that structurists tend to favor quantitative and nonstructurists qualitative methodologies (Fullan, 1979). In my opinion, the methodological differences between the two approaches lie more with epistomologies than with techniques, for as Cook and Reichardt (1979) point out, techniques are mixed across views of how to know reality.

The structured approach to implementation with its emphasis on fidelity implies a need to know the extent to which standard operating procedures or prespecified behaviors have been implemented. Quantifiable outcomes and discrete steps of the implementation process are measured, and compared to intentions for practice derived from policies and curriculum goals. In so doing, reality is simplified and broken down into discrete parts. The methodology employed to assess implementation may be quantitative, but the more fundamental distinction lies in an epistomology that accepts the fragmentation of reality by persons outside of it for the purpose of verifying casual relationships between the various parts. As Rist points out,

> the paradigm governing quantitative methodologies is one derived from the natural sciences. Human events are assumed to be lawful; man and his creations are part of the natural world. The development, elaboration, and verification of generalizations about the natural world become the first task of the researcher. From that one aspires to amass empirical generalizations; then to refine and restructure them into more general laws; and finally to weave these scattered and disparate laws into coherent nomothetic theory. In short, efforts are predicated upon a belief in the correctness of the scientific method as it is practiced in the natural sciences (1977, p. 44).

On the other hand, he continues, the paradigm of the qualitative approach,

> ...begins with models, hypotheses, or theorems, but rather with the understandings of frequently minute episodes or interactions that are examined for broader patterns and processes. It is from an interpretation of the world through the perspective of the subjects that reality, meaning, and behavior are analyzed. The canons and precepts of the scientific method are seen to be insufficient; what are needed are intersubjective understandings (1977, p. 44).

The nonstructurists are less apt to break reality down into its component parts. They tend to view reality holistically (Becher & Maclure, 1978; Parlett & Hamilton, 1977; MacDonald, 1977). They tend not to isolate variables a priori in order to test hypotheses; rather, they tend to discover or generate theories from particular situations. And, finally, they stress use of multimethods to describe implementation in a particular context (Elliott, 1977), rather than reliance on a single method to explain causality.

(3) Posture toward intervention in the change process: The third dimension on which the structured and unstructured approaches may differ is the degree to which they believe in the feasibility and desirability of using information to intervene directly in the change process. I use the word "may" advisedly, as it is difficult to assess through writings how actively and how directly persons advocate intervention. Yet it seems, as Fullan suggests, that the two approaches vary in fundamental value differences about the utility of information to engineer change (1979, p. 26).

As said before, the structured approach defines an innovation before, or apart from, implementation, and in so doing specifies the means considered appropriate to reach certain objectives. What needs to be implemented to bring about change is believed known. Information collected about what is going on can be used directly to guide the behaviors and activities of implementers toward designated goals. There is a belief that change is desirable and possible;

that the means to achieve change are known, that information about the course of change can be reliably and validly obtained, and that it can be used to redirect, or strengthen the ongoing implementation process. The tone is optimistic; the tools are technical; the tradition is rational, and positivist. The belief in using information about implementation to "manage," "make decisions," and "direct" is found in the work of several persons writing about implementation (English, 1979; Hall, 1978; Leithwood, 1978).

The unstructured approach shys away from words such as "manage," "engineer," "control," "manipulate" and uses softer, less direct words such as "describe," "illuminate," and "comprehend." As said before, the nonstructurists emphasize definition of an innovation, in context, by implementers. They question the certainty of knowledge about pedagogies necessary to reach complex goals, emphasizing instead the ability of implementers at particular sites to discover appropriate pedagogies for that site. They seek the subjective understanding of innovations, or policies held by implementers. Evaluation of implementation emphasizes the complexity and holistic nature of innovations, implementation and the change process. It is hoped that information collected will

be useful, but, "...by discarding a spurious 'technological' simplification of reality and by acknowledging the complexity of educational process, the illuminative evaluator is likely to increase rather than lessen the sense of uncertainty in education" (Parlett & Hamilton, 1977, p. 101). The real task is to "provide a comprehensive understanding of the complex reality (or realities) surrounding the project (so as) to sharpen discussion, disentangle complexities, isolate the significant from the trivial, and raise the level of sophistication of debate" (Parlett & Hamilton, 1977, p. 99). Implied is an indirect, rather than direct use of knowledge.

Having suggested three ways in which the two approaches differ in the following sections, I turn to our own Project and present an overview of the CBAM model, its assumptions and tools, and some examples of its application in an evaluation context.

PART III: THE CBAM APPROACH TO IMPLEMENTATION

A. The Concerns-Based Adoption Model: Goals, Assumptions and Measurement Tools

The idea of the Concerns-Based Adoption Model (CBAM) was developed to represent the highly complex process entailed when educational institutions and the individuals in them become involved in implementing innovations (Hall, Wallace & Dossett, 1973). If the model were as complex as the phenomena it attempts to describe, it would be of little value to either researchers or practitioners. Consequently, the CBAM compartmentalizes a highly dynamic and intertwined process that involves many individuals who form up the educational institution and the environment in which they are embeded. It should be noted that a complete model has not been delineated a priori, although several variables relating to attitudes and behaviors of individuals who implement innovations have been defined and operationalized, i.e., Stages of Concern About the Innovation and Levels of Use of the Innovation. The CBAM model is still in development, with variables or parts being induced from field experience as research continues on innovation characteristics, on interventions, and on administrators' roles in the change process. Relationships between individual variables and these other systemic variables are gradually being discovered in the process of collaborative research with a number of school districts throughout the country.

The long-range goals of the CBAM Project are: (1) development and refinement of a model that represents the complex change process in institutions; (2) identification of variables that are operationally definable that lend themselves to quantification; (3) use of these variables in field-based and experimental studies and at the same time by change agents attempting to facilitate innovation implementation. The ultimate goal of the Project is practitioner-oriented: to provide change facilitators and managers with information about their change process which allows them to monitor and adaptively intervene in that process.

There are several assumptions behind the brief descriptions of CBAM as previously described:

1. Change is a process occurring over time that is achieved incrementally and developmentally. It is not an event occurring at a single point in time. However, change can be differentiated into levels of feelings and behaviors experienced by individuals at different stages in that process.

2. Change is a highly personal experience. The personal dimension of change is often more critical to the success or failure of the change process than either the organizational of technological dimension. It is important, therefore, to focus on the individual's role in the implementation process.

3. It is possible to acquire reliable and valid information about individual behaviors and concerns.

4. It is possible and desirable to move the change process along by means of interventions based on knowledge of the behaviors and concerns of individuals involved in the change process.

Through research, two concepts and assessment techniques have been developed to describe two dimensions along which individuals grow as they become more familiar with and sophisticated in using innovations: Stages of Concern About the Innovation (SoC) (Loucks & Hall, 1979) and Levels of Use of the Innovation (LoU) (Hall, Loucks, Rutherford & Newlove, 1975). Two others are currently being developed to aid in the understanding of the change process: Innovation

Configurations (IC) (Hall & Loucks, 1978b) and Interventions (Hall, Zigarmi & Hord, 1979).

The first major dimension, SoC, describes seven kinds of concerns that individuals experience at various times in the change process. These range from early concerns about "self" to concerns about "task" and finally to concerns about "impact." A reliable and valid paper and pencil instrument for assessing Stages of Concern as well as methods for interpreting the measure have been developed (Hall, George & Rutherford, 1977). These have been applied in a number of cross-sectional and longitudinal studies for the purposes of verification, evaluation, and staff development (Hall & Rutherord, 1976; Loucks & Hall, 1979).

The second major dimension, LoU, describes how performance changes as an individual becomes more familiar with an innovation and more skillful at using it. Eight distinct Levels of Use have been identified. In general, individuals first "orient" themselves to the innovation. Then, they begin to use an innovation at a "mechanical" level. As experience increases, users move to a "routine" Level of Use and eventually reach various "refinement" levels where changes in the innovation are based on formal or informal assessments of students' needs. A focused interview procedure has been developed to measure Levels of Use (Loucks, Newlove & Hall, 1975) and has been used in a number of research and evaluation studies (Hall & Loucks, 1978a).

A recent focus of CBAM work has been Innovation Configurations (IC) (Hall & Loucks, 1978b). The concept refers to the different patterns of use an innovation takes as users adapt the innovation. CBAM's work and that of others (Berman & McLaughlin, 1976) has noted the various forms and permutations of an innovation across different users, settings, and time periods. Using both process and product, complex and simple innovations, CBAM staff has been developing

a procedure for identifying the parts or components of an innovation and the different variations in which the components are manifested. The procedure has been used starting from the developer's definition of an innovation, the user's perspective, and a combination of both viewpoints. Several types of analyses have been attempted to discern the patterns in which users implement a particular innovation. It is hypothesized that the arrangement of components into patterns, or Innovation Configurations, are related to SoC, LoU, and ultimately to Interventions.

Interventions are defined as "those actions or events which influence the use of an innovation" (Hall, Zigarmi & Hord, 1979). They, too, have become an increasing focus of Project research. Over the past three years Project staff have been engaged in efforts to observe, document, define, analyze, and classify Interventions. A data base has been built up using descriptive statements of Interventions derived from ethnographers' field notes in two major field sites. A preliminary framework or taxonomy for classifying Interventions has emerged (Hall, Zigarmi & Hord, 1979). It is hoped that after additional reseach the taxonomy can be related to and used with SoC, LoU, and Innovation Configurations in documenting and refining the implementation process.

B. Some Situational Explanations for CBAM's Approach to Implementation

This next section offers some explanations for CBAM's approach to implementation. They are meant to be suggestive rather than conclusive as it is probably never possible to know exactly why any project develops as it does. Three useful facts to keep in mind are: (1) the disciplines and professional experience of project personnel; (2) the general research climate in which the project initially developed; and (3) the source of project funding.

Two groups of people were initially involved in CBAM's development. One group came out of counseling and Frances Fuller's work on the "concerns model"

for personalized teacher education (Hall & Loucks, 1977; Loucks, Newlove & Hall, 1975). Fuller's work and experience with teachers provided background for the development of SoC and the measurement of the affective dimension of change. The other group was trained in the hard sciences and had extensive experience as change facilitators in school districts and higher education institutions throughout the country. This latter group of persons trained in quantitative methodologies influenced the conceptualization of the implementation process into discrete stages and the development of measurement techniques based on quantitative analyses of empirical data. Interestingly, the work experience of both groups was with individuals, as interventionists in the lives of their clients, and, as such, has undoubtedly influenced the focus on individual rather than institutional change.

Another possible explanation of CBAM's orientation is the general cultural climate when CBAM first started. The 1960's was a time of great optimism in which both education and research were believed capable of addressing the social ills of poverty, illiteracy, and juvenile delinquency. Along with faith in education and research was the belief that growth, progress and prosperity could be brought about through the use of human rationality. Complex social realities were believed knowable using scientific research techniques. Knowledge acquired through research was deemed useable in direct ways for social engineering purposes. Change was believed possible. It was in this general climate of optimism and affluence that the CBAM Project first got started. It seems plausible to posit that this general climate influenced the Project's posture toward change, intervention and the direct utility of data empirically collected in managing the change process.

Thirdly, the agreement with the National Institute of Education (NIE), the Project's primary funding source, has also influenced CBAM's approach to implementation research. The Project's mandate from NIE has been to develop, in collaboration with field-based practitioners, approaches and instruments to measure the implementation process and to increase understanding about how effective change occurs. CBAM's primary role is that of researcher and as such the Project has focused on the development of concepts and measurement procedures of utility to practitioners. Only as researchers, albeit with extensive experience as practitioners and change agents and at the request of practitioners, has CBAM collaborated in the implementation of innovations.

As a result of our formal mandate, the Project has become known to most outsiders through written reports and articles about LoU and SoC instruments and resultant research. Little publicity has been given to the workshops introducing the CBAM approach to evaluators and change facilitators in which the utility of LoU, SoC, and IC in monitoring and assisting the change process is emphasized. Likewise, little writing has been done on the more conceptual, less measurement-oriented aspects of the CBAM model. So, CBAM's public image is a "structured" one, due in part to the subject matter emphases in our publications.

C. Some Applications of the CBAM

An example of CBAM's application to a major change effort is offered in the collaborative effort of the CBAM Project and the Jefferson County (Colorado) Public Schools, a suburban school district which serves 80,000 students. The game plan for district-wide adoption of a revised science curriculum for grades 3-6 was designed collaboratively by the school district with CBAM staff, using the Concerns-Based Adoption Model as a framework (Loucks & Hall, 1979; Loucks & Pratt, 1979; Hall, Hord & Griffin, 1980). Stages of Concern formed the basis

for staff development and support activities to elementary teachers. LoU provided a tool for goal setting to district staff who decided early in the implementation effort that teachers were to have at least a Routine Level of Use (LoU IVA) at the completion of implementation. For the purpose of LoU assessment, use of the program was defined simply as teachers' use of the district teachers' guide. As there could be many ways (i.e., Innovation Configurations) teachers might implement the strategies found in the guide, developers saw a need for an expanded definition of the innovation in terms unique and specific to the total science program. The district operationalized what the program would look like when implemented in the best possible manner. With these definitions, staff members monitored the extent of implementation of each of the program components. With information on LoU, SoC, and innovation components, district staff was able to diagnose teacher concerns and plan staff development activities, to monitor the overall change effort, and to examine which parts of the innovative curriculum were most successfully implemented from the district's point of view.

A different application of CBAM is provided in the collaborative evaluation of a math skills monitoring system by CBAM staff, a district evaluator, and classroom teachers (Hord & Reidy, 1979; George & Hord, 1980). The Skills Achievement Monitoring System (SAM) is a management system to assess math skills of elementary and secondary students that was developed by teachers and district personnel at the Fitchburg, Massachusetts Public Schools. Critical math skills at each grade level were identified and test items to measure each skill were developed. Pre-packaged commercial materials were keyed to the math objectives. The district analyzed test results and returned them to teachers in the form of computer printouts for each student. The objectives, test items and test results became the heart of the math management system. What teachers did

with the test results, what materials teachers used, and how they used them were purposely left up to the teachers.

District personnel asked CBAM staff to assist them in a dual purpose evaluation to understand what teachers had done, if anything, with the SAM, and to garner information for national validation of the SAM as an exemplary program. The primary questions of interest in both cases were: Do teachers use the SAM? In conjunction with, or independent of other means of diagnosing and prescribing student needs? In what ways do teachers use SAM? Is there any relationship between the ways in which teachers use the SAM and student achievement in math?

To answer these questions, teachers' LoU was assessed and a series of open-ended questions, regarding use of the objectives, instructional materials, tests and test results, and the remediation subsequently offered students, was asked. CBAM staff developed a list of 145 teacher behaviors after reviewing interview tapes. The items were reworded, edited and a collapsed into 29 statements representing the variety of teacher practices and behaviors as specified by teachers. Tapes were used again to complete a checklist for each teacher. Teachers were then clustered into hi-medium-low implementation groups and the relationship of student outcomes to different teacher behaviors -- or ways of implementing the SAM -- were explored (George & Hord, 1980).

Results of the analysis were, or will be, used in two ways. First, information about different uses of the SAM were shared among teachers, who, for the first time, had information on the practices of other teachers. Each of the activities or methods had been "field-tested" by other teachers. Second, information about implementation of the SAM, defined from the teachers' perspective,

was available to the district for use in dissemination of the innovation to other districts. Thirdly, in terms of implementation research, CBAM staff had successfully developed a procedure for describing innovation configurations -- the three groups of teacher behaviors -- from teacher statements about the innovations. The innovation configuration data collection procedure was easily used in conjunction with the LoU interview. The collaborative effort resulted in definition of an innovation from the users' perspective; identification of three innovation configurations; assessment of the relationship of student achievement and different implementation patterns; and information about overall teacher facility in using the innovation in the form of an LoU rating. In Fitchburg as in Jeffco, CBAM staff was able to pursue research priorities while servicing practitioner needs.

A few general comments on the type of evaluation context in which the CBAM model and techniques seems appropriate before moving to the final section. First, it is apparent that CBAM focuses on implementation at the local level, and hence on innovations rather than policies. However, at the local level, it has worked with both process and product-type innovations. Second, CBAM techniques currently apply to individuals, although work over the next three years will in part focus on measuring aspects of the organization and environments in which individuals work. Hence, CBAM is more applicable to the assessment of individual rather than instructional change. Thirdly, CBAM focuses on implementation and not on the outcomes of implementation. Although its technology is intended for use as part of outcome assessment, it does not include techniques to measure outcomes.

Lastly, and perhaps most significant for evaluation are the the values CBAM holds about the possibility of gathering useable knowledge and the value of such

information in diagnosing and prescribing interventions in the change process. CBAM itself is not directly involved in advocating practical application of the data its instruments yield. Yet it believes and advocates intervention in general. As such the approach seems best suited to settings in which information is desired to assist decision-making about the ongoing implementation process and in which persons hold some of the same values about the utility, possibility, and desirability of using data for interventions in the change process.

PART IV: STRUCTURED OR UNSTRUCTURED: WHICH SHOE FITS?

In his overview, Fullan has portrayed CBAM as a structured approach to implementation. Elsewhere he has termed the approach "fidelity" or "programmed" and has described it as

> a more explicit attempt to (1) assess degree of implementation in a differentiated, reliable and valid manner, (2) to assess implementation over time within a given population of users, (3) to use this information to identify variations in use, and to diagnose, monitor and facilitate more faithful implementation, and (4) to use the information to examine the relationship between implementation and student achievement. In short, the programmed perspective insists that implementation can be defined in advance, can and should be measured in a direct way, and that variations in degree and quality of implementation can be improved (1980, pp. 9-10).

In the final part of my discussion, I would like to consider the characterization of CBAM as a structured approach to implementation, and, using the three dimensions discussed in Part II, examine to what extent CBAM is structured, or unstructured in its approach to implementation.

As I have indicated, there are situational factors that suggest CBAM is likely to have structured aspects: the training of Project personnel in the traditional quantitative paradigm; the climate of optimism fostering beliefs in rationally induced change; and the mandate from funding sources to concentrate

on research and development of measurement techniques for the purpose of understanding and facilitating change in schools.

Indeed, there are several ways in which CBAM is structured. Foremost is its belief in engineered progress, in the possibility of employing knowledge and technology to effect the change process. LoU and SoC provide reliable and valid information, scientifically derived, to monitor implementation. CBAM itself might be considered a technology: a set of diagnostic instruments which provide information to be used in making appropriate interventions in the change process.

Further, the tools of the trade, SoC and LoU, assume that the attitudes and behaviors of individuals engaged in the implementation process can be broken down, or out, into discrete, definable, knowable levels, or stages. Their existence is predicated on the belief that these stages exist across individuals, settings, and points in time. They are general states -- part of, but isolated from the flow of the implementation process. To the extent that CBAM is concerned with measuring general dimensions of individuals and applies a common methodology to different settings and innovations to capture these dimensions, then, CBAM is like the structured approach which compartmentalizes reality and isolates variables from a dynamic process.

However, beyond these two points the similarity with the structured approach recedes. The general model, use of qualitative techniques, and collaborative efforts with school-based practitioners seem to suggest more unstructured aspects to the CBAM approach.

CBAM was one of the first projects studying the implementation to portray the process as a dynamic, interactive, changing one that varies from context to context and implementer to implementer (Hall, Wallace & Dossett, 1973). This

belief in the interactive nature of the implementation process is characteristic of the unstructured approach.

Further, because of the changing, interactive, and context-specific nature of the process, CBAM has intentionally avoided defining what implementation should be like, and what interventions should be made. This has been left to practitioners with whom CBAM collaborated. That is to say, there is nothing in the CBAM model or assumptions that advocates a fidelity approach to the concept and measurement of implementation. For example, in developing the concept of Innovation Configurations, CBAM worked on a procedure to identify the component parts of an innovation, similar to the work of Leithwood (1978). In the past the starting point for identification of the parts was the developer's description of the innovation, modified and expanded by user interpretation and verification. More recently, the procedure has started from the user perspective and defined implementation activities, behaviors and attitudes from the point of view of persons adapting, or co-opting the innovation. Depending on client and therein the question addressed, one starting point may be more appropriate than the other. However, in applying the procedure, CBAM does not a priori adopt a fidelity perspective, either in describing an inovation or in prescribing interventions to promote the implementation of an innovation.

Lastly, the use of qualitative methodologies -- participant observation, unstructured interviewing, and unobtrusive measurement -- over the past three years speaks to the acknowledgement and commitment to the interpretation of change from the users' perspective, to the discussion of isolated variables within the reality of particular settings, and to the benefits of understanding to be obtained from the combination of methods and approaches.

In closing, I might ask, "Which shoe fits?" Neither, and both.

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